(Adopted November 5, 2010)(Amended January 10, 2014)
(Amended March 7, 2014)
(PAR 1420.1 February 2015)

PROPOSED AMENDED RULE 1420.1. EMISSION STANDARDS FOR LEAD AND OTHER TOXIC AIR CONTAMINANTS FROM LARGE LEAD-ACID BATTERY RECYCLING FACILITIES

(a) Purpose

(1) The purpose of this rule is to protect public health by reducing exposure and emissions of lead from large lead-acid battery recycling facilities, and to help ensure attainment and maintenance of the National Ambient Air Quality Standard for Lead. The purpose of this rule is to also protect public health by reducing arsenic, benzene, and 1,3-butadiene exposure and emissions from these facilities.

(b) Applicability

(1) This rule applies to all persons who own or operate a lead-acid battery recycling facility that has processed more than 50,000 tons of lead a year in any one of the five calendar years prior to November 5, 2010, or annually thereafter, hereinafter a large lead-acid battery recycling facility. Applicability shall be based on facility lead processing records required under subdivision (m) of this rule, and Rule 1420 – Emissions Standards for Lead. Compliance with this rule shall be in addition to other applicable rules such as Rules 1407 and 1420.

(c) Definitions

For the purposes of this rule, the following definitions shall apply:

(1) AGGLOMERATING FURNACE means a furnace used to melt flue dust that is collected from an emission control device, such as a baghouse, into a solid mass.

(2) AMBIENT AIR for purposes of this rule means outdoor air.

(3) ARSENIC means the oxides and other compounds of the element arsenic included in particulate matter, vapors, and aerosols.

(4) BATTERY BREAKING AREA means the plant location at which lead-acid batteries are broken, crushed, or disassembled and separated into components.

(5) BENZENE means an organic compound with chemical formula C_6H_6 and

Chemical Abstract Service number 71-43-2.

(6) 1,3-BUTADIENE means an organic compound with chemical formula C_4H_6 and Chemical Abstract Service number 106-99-0.

(7) DRYER means a chamber that is heated and that is used to remove moisture from lead-bearing materials before they are charged to a smelting furnace.

(8) DRYER TRANSITION PIECE means the junction between a dryer and the charge hopper or conveyor, or the junction between the dryer and the smelting furnace feed chute or hopper located at the ends of the dryer.

(9) DUCT SECTION means a length of duct including angles and bends which is contiguous between two or more process devices (e.g., between a furnace and heat exchanger; baghouse and scrubber; scrubber and stack; etc.).

(10) EMISSION COLLECTION SYSTEM means any equipment installed for the purpose of directing, taking in, confining, and conveying an air contaminant, and which at minimum conforms to design and operation specifications given in the most current edition of *Industrial Ventilation, Guidelines and Recommended Practices,* published by the American Conference of Government and Industrial Hygienists, at the time a complete permit application is filed with the District.

(11) EMISSION CONTROL DEVICE means any equipment installed in the ventilation system of a point source or emission collection system for the purposes of collecting and reducing emissions of arsenic, benzene, lead, 1,3-butadiene, or any other toxic air contaminant.

(12) FUGITIVE LEAD-DUST means any solid particulate matter containing lead that is in contact with ambient air and has the potential to become airborne.

(13) FURNACE AND REFINING/CASTING AREA means any area of a large lead-acid battery recycling facility in which:

- (a) Smelting furnaces or agglomerating furnaces are located; or
- (b) Refining operations occur; or
- (c) Casting operations occur.

(14) LEAD-ACID BATTERY RECYCLING FACILITY means any facility, operation, or process in which lead-acid batteries are disassembled and recycled into elemental lead or lead alloys through smelting.

(15) LEAD means elemental lead, alloys containing elemental lead, or lead compounds, calculated as elemental lead.

(16) LEEWARD WALL means the furthest exterior wall of a total enclosure that is opposite the windward wall.

(17) MAINTENANCE ACTIVITY means any of the following activities conducted outside of a total enclosure that generates or has the potential to generate fugitive lead-dust:

(a) building construction, renovation, or demolition;

(b) replacement or repair of refractory, filter bags, or any internal or external part of equipment used to process, handle, or control lead-containing materials;

(c) replacement of any duct section used to convey lead-containing exhaust;

(d) metal cutting or welding that penetrates the metal structure of any equipment, and its associated components, used to process lead-containing material, such that lead dust within the internal structure or its components can become fugitive lead-dust; ~~or~~

(e) resurfacing, grading, repair, or removal of ground, pavement, concrete, or asphalt; or~~.~~

(f) soil disturbances, including but not limited to, soil sampling, soil remediation, or activities where soil is moved, removed, and/or stored.

(18) MATERIALS STORAGE AND HANDLING AREA means any area of a large lead-acid battery recycling facility in which lead-containing materials including, but not limited to, broken battery components, reverberatory furnace slag, flue dust, and dross, are stored or handled between process steps. Areas may include, but are not limited to, locations in which materials are stored in piles, bins, or tubs, and areas in which material is prepared for charging to a smelting furnace.

(19) MEASURABLE PRECIPITATION means any on-site measured rain amount ~~of~~ greater than 0.01 inches in any complete 24-hour calendar day (i.e., midnight to midnight).

(20) PARTIAL ENCLOSURE for purposes of this rule means a structure comprised of walls or partitions on at least three sides or three-quarters of the perimeter that surrounds areas where maintenance activity is conducted, in order to prevent the generation of fugitive lead-dust.

(21) POINT SOURCE means any process, equipment, or total enclosure used in a large lead-acid battery recycling facility, including, but not limited to, agglomerating furnaces, dryers, smelting furnaces and refining kettles, whose emissions pass through a stack or vent designed to direct or control

the exhaust flow prior to release into the ambient air.

(22) PROCESS means using lead or lead-containing materials in any operation including, but not limited to, the charging of lead-containing materials to smelting furnaces, lead refining and casting operations, and lead-acid battery breaking.

(23) RENOVATION for purposes of this rule means the altering of a building or permanent structure, or the removal of one or more of its components that generates fugitive lead-dust ~~emissions~~.

(24) SENSITIVE RECEPTOR means, for the purposes of this rule, any residence including private homes, condominiums, apartments, and living quarters; education resources such as preschools and kindergarten through grade twelve (k-12) schools; daycare centers; and health care facilities such as hospitals or retirement and nursing homes. A sensitive receptor includes long term care hospitals, hospices, prisons, and dormitories or similar live-in housing.

(25) SLAG means the inorganic material by-product discharged, in molten state, from a lead smelting furnace that has a lower specific gravity than lead metal and contains lead compounds. This shall include, but is not limited to, lead sulfate, lead sulfide, lead oxides, and lead carbonate consisting of other constituents charged to a smelting furnace which are fused together during the pyrometallurgical process.

(26) SMELTING means the chemical reduction of lead compounds to elemental lead or lead alloys through processing in high temperatures greater than 980° C.

(27) SMELTING FURNACE means any furnace where smelting takes place including, but not limited to, blast furnaces, reverberatory furnaces, rotary furnaces, and electric furnaces.

(28) STATIC DIFFERENTIAL FURNACE PRESSURE means the difference between the absolute internal pressure of the smelting furnace (P_f, in inches water column) and the absolute atmospheric pressure in the immediate vicinity outside the smelting furnace (P_a, in inches water column) and is calculated as follows: $P_f - P_a$.

(29) TOTAL ENCLOSURE means a permanent containment building/structure, completely enclosed with a floor, walls, and a roof to prevent exposure to the elements, (e.g., precipitation, wind, run-off), with limited openings to allow access and egress for people and vehicles, that is free of cracks, gaps,

corrosion, or other deterioration that could cause or result in fugitive lead-dust.

(30) TOXIC AIR CONTAMINANT is an air pollutant which may cause or contribute to an increase in mortality or serious illness, or which may pose a present or potential hazard to human health.

(31) WINDWARD WALL means the exterior wall of a total enclosure which is most impacted by the wind in its most prevailing direction determined by a wind rose using data required under paragraph (j)(5) of this rule, or other data approved by the Executive Officer.

(d) General Requirements

~~The owner or operator of a large lead-acid battery recycling facility shall be subject to the following requirements:~~

(1) Ambient Air Concentration of Lead

~~Prior to January 1, 2012, emissions~~ The owner or operator of a large lead-acid battery recycling facility shall not discharge emissions ~~shall not be discharged~~ into the atmosphere which contribute to ambient air concentrations of lead that exceed the following:

Effective Date	Ambient Air Concentration of Lead, micrograms per cubic meter ($\mu g/m^3$), averaged over 30 consecutive days
Prior to January 1, 2016	0.150 $\mu g/m^3$
January 1, 2016 to December 31, 2016	0.110 $\mu g/m^3$
On and after January 1, 2017	0.100 $\mu g/m^3$

~~1.50 micrograms per cubic meter ($\mu g/m^3$) pursuant to District Rule 1420.~~ An exceedance of the ambient air concentrations of lead specified in the above table shall occur if it is measured by any monitor installed pursuant to subdivision (j) or at any District-installed monitor.

~~(2) On and after January 1, 2012, emissions shall not be discharged into the atmosphere which contribute to ambient air concentrations of lead that exceed 0.150 µg/m3 averaged over any 30 consecutive days. The ambient air concentrations of lead shall be determined by monitors pursuant to subdivision (j) or at any District-installed monitor.~~

(~~3~~2) ~~No later than July 1, 2011, install, maintain~~ The owner or operator of a large lead-acid battery recycling facility shall maintain~~,~~ and operate total

enclosures pursuant to subdivision (e) and lead point source emission control devices pursuant to paragraphs (f)(1) and (f)(6) through (f)(8). ~~The owner or operator of a large lead-acid battery recycling facility shall comply with both subparagraphs (d)(3)(A) and (d)(3)(B):~~

~~(A) Submit complete permit applications for all construction and necessary equipment within 30 days of November 5, 2010.~~

~~(B) Complete all construction within 180 days of receiving Permit to Construct approvals from the Executive Officer, or by July 1, 2011, whichever is earlier.~~

~~(C) The Executive Officer may approve a request for an extension of the compliance deadline date if the facility can demonstrate that it timely filed all complete permit applications and is unable to meet the deadline due to reasons beyond the facility's control. The request shall be submitted to the Executive Officer no less than 30 days before the compliance deadline date.~~

(4<u>3</u>) ~~On and after July 1, 2011~~ <u>The owner or operator of a large lead-acid battery recycling facility shall</u> submit a Compliance Plan ~~pursuant to subdivision (g)~~ if emissions are discharged into the atmosphere which contribute to ambient air concentrations of lead <u>or arsenic</u> that exceed <u>the ambient concentrations in paragraph (g)(1).</u> ~~0.120 (µg/m^3) averaged over any 30 consecutive days determined by monitors pursuant to subdivision (j) or at any District-installed monitor.~~

(~~5~~<u>4</u>) The owner or operator of a large lead-acid battery recycling facility shall:

(A) Within 30 days of January 10, 2014, submit a Compliance Plan Schedule to the Executive Officer for review and approval to ensure that the facility will comply with the January 1, 2015 total facility mass emissions limits for arsenic, benzene, and 1,3-butadiene point sources specified in paragraph (f)(2). The Compliance Plan Schedule shall be subject to plan fees specified in Rule 306 and include:

(i) a list of all control measures to be implemented that includes a description of the control technology, the equipment that will be affected, the affected pollutants, the anticipated reductions, and the dates the measures will be implemented; and

(ii) a schedule that identifies dates for completion of engineering

design(s), equipment procurement, construction, demolition (if any), equipment installation, and testing for each control measure described pursuant to clause (d)(4)(A)(i) ~~(d)(5)(A)(i)~~.

(B) Submit complete permit applications for all equipment specified in the Compliance Plan Schedule that requires a District permit within 90 days of January 10, 2014.

(C) Complete all construction within 180 days of receiving Permit to Construct approvals from the Executive Officer.

(D) The owner or operator of a large lead-acid battery recycling facility shall not be subject to requirements of subparagraphs (d)(4)(A) through (d)(4)(C) ~~(d)(5)(A) through (d)(5)(C)~~ if the most recent District-approved source tests, conducted no earlier than January 1, 2011, show that the facility is meeting all of the emission limits specified in paragraph (f)(2).

(~~6~~5) Ambient Air Concentration of Arsenic

~~On and after February 1, 2014, the~~ The owner or operator of a large lead-acid battery recycling facility shall not ~~allow~~ discharge emissions ~~to be discharged~~ into the atmosphere which contribute to an ambient air concentration of arsenic that exceeds 10.0 nanograms per cubic meter (ng/m^3) averaged over a 24-hour time period as determined by monitors pursuant to subdivision (j) or by any District-installed monitor. An exceedance of 10.0 ng/m^3 averaged over a 24-hour period shall be based on the average of the analysis of two sample results on the same filter. A second analysis is required if the first sample exceeds 10.0 ng/m^3.

(~~7~~6) If the ambient air concentration of arsenic is determined to exceed 10.0 ng/m^3 averaged over a 24-hour time period as calculated pursuant to paragraph (d)(~~6~~5), then the owner or operator shall notify the Executive Officer in writing within 72 hours of when the facility knew or should have known it exceeded the ambient air arsenic concentration of 10.0 ng/m^3 averaged over a 24-hour time period.~~:~~

~~(A) Notify the Executive Officer in writing within 72 hours of when the facility knew or should have known it exceeded the ambient air arsenic concentration of 10.0 ng/m^3 averaged over a 24-hour time period; and~~

~~(B) Comply with the monitoring and sampling requirements in paragraph~~

~~(j)(10).~~

(~~8~~7) The owner or operator of a large lead-acid battery recycling facility shall fund and participate in a multi-metal continuous emissions monitoring system (CEMS) demonstration program to continuously monitor lead, arsenic, and other metals emitted from a stack within its facility for a period specified by the District. Participation and funding of the multi-metals CEMS demonstration program shall require the owner or operator to:

(A) Submit payment to the District for District personnel or its contractor to assemble, install, maintain, train, test, analyze, and decommission a multi-metals CEMS demonstration program not to exceed the following amounts and schedule:

(i) $63,500 by April 1, 2014; and an additional

(ii) $143,225 by September 1, 2014

(B) Provide continuous facility access to District personnel and its contractors to deliver, assemble, install, monitor, maintain, test, analyze, and decommission a multi-metals CEMS;

(C) Provide the necessary location and infrastructure for the multi-metals CEMS including:

(i) siting location with sufficient spacing, clearance, and structural support;

(ii) electric power circuits;

(iii) compressed air;

(iv) sampling port(s);

(v) access to wireless modem connection for data retrieval;

(vi) any necessary moving or lifting equipment and personnel to operate such equipment in order to install the system; and

(vii) day to day instrument and equipment operation.

(e) Total Enclosures

(1) Enclosure Areas

The owner or operator of a large lead-acid battery recycling facility shall enclose within a total enclosure the following areas in groups or individually:

(A) Battery breaking areas;

(B) Materials storage and handling areas, excluding areas where unbroken lead-acid batteries and finished lead products are stored;

(C) Dryer and dryer areas including dryer transition pieces, charging hoppers, chutes, and skip hoists conveying any lead-containing material;

(D) Smelting furnaces and smelting furnace areas charging any lead-containing material;

(E) Agglomerating furnaces and agglomerating furnace areas charging any lead-containing material; and

(F) Refining and casting areas.

(2) Total Enclosure Emissions Control

The owner or operator of a large lead-acid battery recycling facility shall vent each total enclosure to an emission collection system that ducts the entire gas stream which may contain lead to a lead emission control device and the entire gas stream which may contain arsenic to an arsenic emission control device, respectively, pursuant to subdivision (f).

(3) Total Enclosure Ventilation

Ventilation of the total enclosure at any opening including, but not limited to, vents, windows, passages, doorways, bay doors, and roll-ups shall continuously be maintained at a negative pressure of at least 0.02 mm of Hg (0.011 inches H_2O) measured pursuant to paragraph (e)(4).

(4) Digital Differential Pressure Monitoring Systems

The owner or operator of a large lead-acid battery recycling facility shall install, operate, and maintain a digital differential pressure monitoring system for each total enclosure as follows:

(A) A minimum of one building digital differential pressure monitoring system shall be installed and maintained at each of the following three walls in each total enclosure having a total ground surface area of 10,000 square feet or more:

(i) The leeward wall;

(ii) The windward wall; and

(iii) An exterior wall that connects the leeward and windward wall at a location defined by the intersection of a perpendicular line between a point on the connecting wall and a point on its furthest opposite exterior wall, and intersecting within plus or minus ten ($\pm$10) meters of the midpoint of a straight line between the two other monitors specified in clauses (e)(4)(A)(i) and (e)(4)(A)(ii). The

midpoint monitor shall not be located on the same wall as either of the other two monitors described in clauses (e)(4)(A)(i) or (e)(4)(A)(ii).

(B) A minimum of one building digital differential pressure monitoring system shall be installed and maintained at the leeward wall of each total enclosure that has a total ground surface area of less than 10,000 square feet.

(C) Digital differential pressure monitoring systems shall be certified by the manufacturer to be capable of measuring and displaying negative pressure in the range of 0.01 to 0.2 mm Hg (0.005 to 0.11 inches H_2O) with a minimum increment of measurement of plus or minus 0.001 mm Hg (0.0005 inches H_2O).

(D) Digital differential pressure monitoring systems shall be equipped with a continuous strip chart recorder or electronic recorder approved by the Executive Officer. If an electronic recorder is used, the recorder shall be capable of writing data on a medium that is secure and tamper-proof. The recorded data shall be readily accessible upon request by the Executive Officer. If software is required to access the recorded data that is not readily available to the Executive Officer, a copy of the software, and all subsequent revisions, shall be provided to the Executive Officer at no cost. If a device is required to retrieve and provide a copy of such recorded data, the device shall be maintained and operated at the facility.

(E) Digital differential pressure monitoring systems shall be calibrated in accordance with manufacturer's specifications at least once every 12 calendar months or more frequently if recommended by the manufacturer.

(F) Digital differential pressure monitoring systems shall be equipped with a backup, uninterruptible power supply to ensure continuous operation of the monitoring system during a power outage.

(5) In-draft Velocity

The in-draft velocity of the total enclosure shall be maintained at $\geq$ 300 feet per minute at any opening including, but not limited to, vents, windows, passages, doorways, bay doors, and roll-ups. In-draft velocities for each total enclosure shall be determined by placing an anemometer, or an equivalent device approved by the Executive Officer, at the center of the

plane of any opening of the total enclosure.

(f) Point Source Emissions Controls

The owner or operator of a large lead-acid battery recycling facility shall vent emissions from each lead, arsenic, benzene, and 1,3-butadiene point source to a lead, arsenic, benzene, and 1,3-butadiene emission control device, respectively, that meets the requirements of this subdivision and is approved in writing by the Executive Officer.

(1) Lead Point Source Emission Controls

The owner or operator of a large lead-acid battery recycling facility shall:

(A) Prior to January 1, 2016, ~~Meet~~ meet a total facility mass lead emissions from all lead point sources not to exceed 0.045 pounds of lead per hour. On and after January 1, 2016, meet a total facility mass lead emissions from all lead point sources not to exceed 0.023 pounds of lead per hour. The maximum emission rate for any single lead point source shall not exceed 0.010 pounds of lead per hour. The total facility mass lead emission rate and maximum emission rates for any single lead point source shall be determined using the most recently approved source tests conducted on behalf of the facility or the District; and

(B) Install a secondary lead emission control device that controls lead emissions from the exhaust of the primary lead emission control device used for a dryer. The secondary lead emission control device shall be fitted with dry filter media, and the secondary lead control device shall only be used to vent the primary lead emission control device used for the dryer. An alternative secondary lead control method that is equally or more effective for the control of lead emissions may be used if a complete application is submitted as part of the permit application required under paragraph (d)(~~3~~2) and approved by the Executive Officer.

(2) Arsenic, Benzene and 1,3-Butadiene Point Source Emission Controls

The mass emissions from all arsenic, benzene, and 1,3-butadiene point sources at a large lead-acid battery recycling facility shall meet the following hourly emissions thresholds for the dates specified:

(A) No later than 60 days after January 10, 2014, the total facility emission rate for a large lead-acid battery recycling facility from all

point sources shall not exceed 0.00285 pound of arsenic per hour.

(B) No later than January 1, 2015, the total facility emission rate for a large lead-acid battery recycling facility from all point sources shall not exceed 0.00114 pound of arsenic per hour.

(C) No later than January 1, 2015, the total emission rate for a large lead-acid battery recycling facility from all point sources excluding point sources from emission control devices on total enclosures shall not exceed the following:

(i) 0.0514 pound of benzene per hour; and

(ii) 0.00342 pound of 1,3-butadiene per hour.

(D) The point source mass emission rates shall be determined based on the average of triplicate samples, using the most recent District-approved source tests conducted by the facility or the District, pursuant to subdivision (k).

(E) For purposes of this rule, only point sources that have a source test result of greater than 1 part per billion shall be included in determining the total facility mass emission rates for benzene and 1,3-butadiene.

(3) Monitoring Device

~~No later than 90 days after January 10, 2014, the~~ The owner or operator of a large lead-acid battery recycling facility shall, for each smelting furnace, install, calibrate, operate and maintain a monitoring device that has been approved by the Executive Officer pursuant to paragraph (f)(4). The monitoring device shall measure and record the static differential furnace pressure in inches water column. Each smelting furnace shall be operated such that static differential furnace pressure, in inches of water column averaged over 30 minutes, is maintained at a value -0.02 or more negative. A reverberatory furnace may be operated at an alternative static differential furnace pressure if the owner or operator can demonstrate that it can achieve emission reductions that are equivalent to or better than those achieved when operating at a pressure of -0.02 or more negative. Demonstration shall be based on source test protocols and source tests conducted pursuant to the requirements of subdivision (k) and approved by the Executive Officer. The alternative static differential furnace pressure shall not exceed 0.4 inches water column and must be approved by the Executive Officer in the Continuous Furnace Pressure Monitoring Plan of paragraph (f)(4). For the

purposes of this requirement, the owner or operator shall ensure that the monitoring device:

(A) Continuously measures the instantaneous static differential furnace pressure;

(B) Has a resolution of at least 0.01 inches water column;

(C) Has an increment of measurement of 0.01 inches water column;

(D) Has a range from -10 inches to +10 inches water column for the measuring device;

(E) Is equipped with ports to allow for periodic calibration in accordance with manufacturer's specifications;

(F) Is calibrated according to manufacturer's specifications at a frequency of not less than twice every calendar year;

(G) Is equipped with a continuous data acquisition system (DAS). The DAS shall record the data output from the monitoring device at a frequency of not less than once every sixty (60) seconds;

(H) Generates a data file from the computer system interfaced with each DAS each calendar day. The data file shall be saved in electronic ASCII character format, Microsoft Excel (xls or xlsx) format, PDF format, or other format as approved by the Executive Officer. The file shall contain a table of chronological date and time and the corresponding data output value from the monitoring device in inches of water column. The operator shall prepare a separate data file each day showing the 30-minute average pressure readings recorded by this device each calendar day; and

(I) Is maintained in accordance with manufacturer's specifications.

(4) No later than 30 days after January 10, 2014, the owner or operator of a large lead-acid battery recycling facility shall submit to the Executive Officer for approval an application for a Continuous Furnace Pressure Monitoring (CFPM) Plan for the monitoring device required in paragraph (f)(3). The CFPM Plan shall contain the information identified in Appendix 3 of this rule and is subject to the fees specified in Rule 306.

(5) The Executive Officer shall notify the owner or operator in writing whether the CFPM Plan is approved or disapproved. Determination of approval status shall be based on, at a minimum, submittal of information that satisfies the criteria set forth in paragraph (f)(4). If the CFPM Plan is disapproved, the owner or operator shall resubmit the CFPM Plan, subject to

plan fees specified in Rule 306, within 30 calendar days after notification of disapproval of the CFPM Plan. The resubmitted CFPM Plan shall include any information necessary to address deficiencies identified in the disapproval letter. It is a violation of the rule for a facility not to have an approved CFPM Plan after the second denial. If the resubmitted CFPM Plan is denied, the operator or owner may appeal the denial by the Executive Officer to the Hearing Board pursuant to Rule 216 – Appeals and Rule 221 - Plans.

(6) For any emission control device that uses filter media other than a filter bag(s), including, but not limited to, HEPA and cartridge-type filters, the filter(s) used shall be rated by the manufacturer to achieve a minimum of 99.97% capture efficiency for 0.3 micron particles.

(7) For any emission control device that uses a filter bag(s), the filter bag(s) used shall be polytetrafluoroethylene membrane-type, or any other material that is equally or more effective for the control of lead emissions, and approved for use by the Executive Officer.

(8) Each emission collection system and emission control device subject to this subdivision shall, at minimum, be inspected, maintained, and operated in accordance with the manufacturer's specifications.

(9) The owner or operator of a large lead-acid battery recycling facility shall comply with the curtailment requirements in subdivision ~~(p)~~(o) if the total facility mass lead emissions from all lead point sources exceeds the limits specified in subparagraph (f)(1)(A), and/or the total facility emission rate from all arsenic point sources exceeds the limits specified in subparagraph (f)(2)(A) or (f)(2)(B).

(g) Compliance Plan

(1) ~~On and after July 1, 2011, t~~The owner or operator of a large lead-acid battery recycling facility shall submit a Compliance Plan if emissions are discharged into the atmosphere which contribute to ambient air concentrations of lead or arsenic that exceed the following:

Air Contaminant	Effective Date	Ambient Air Concentration
Lead	Prior to January 1, 2016	0.120 µg/m^3, averaged over 30 consecutive days
	January 1, 2016 to December 31, 2106	0.110 µg/m^3, averaged over 30 consecutive days
	On and after January 1, 2017	0.100 µg/m^3, averaged over 30 consecutive days
Arsenic	On and after February 1, 2014	8 ng/m^3, averaged over a 24 hour time period as determined under paragraph (g)(8)

~~averaged over any 30 consecutive days, or an ambient air concentration of arsenic that exceeds 8.0 ng/m^3 averaged over a 24-hour time period pursuant to paragraph (g)(7)~~The ambient air concentrations of lead and arsenic shall be~~, as~~ determined by monitors pursuant to subdivision (j) or at any District-installed monitor.~~, and shall:~~

(~~1~~2) The owner of operator of a large lead-acid battery recycling facility shall ~~Notify~~ notify the Executive Officer in writing within 72 hours of when the facility knew or should have known it exceeded an ambient air concentration of lead or arsenic specified in paragraph (g)(1).~~of 0.120 µg/m^3 averaged over any 30 consecutive days, or an ambient air concentration of arsenic of 8.0 ng/m^3 averaged over a 24-hour time period as determined in paragraph (g)(7)~~. Notification shall only be required the first time the ambient air concentration of lead or arsenic exceeds the concentration limits in paragraph (g)(1) ~~of 0.120 µg/m^3 or an ambient air concentration of arsenic of 8.0 ng/m^3 is exceeded~~ for each monitor;

(~~2~~3) The owner or operator of a large lead-acid battery recycling facility shall ~~Submit~~submit, within 30 calendar days of exceeding an ambient air concentration of lead or arsenic pursuant to paragraph (g)(1),~~ of 0.120 µg/m^3 averaged over any 30 consecutive days, or exceeding an ambient air concentration of arsenic of 8.0 ng/m^3 averaged over a 24-hour time period as determined in paragraph (g)(7),~~ a complete Compliance Plan to the Executive Officer for review and approval, subject to plan fees as specified in Rule 306. The Compliance Plan shall, at a minimum, include the

following:

(A) A description of additional lead and/or arsenic emission reduction measures to achieve the ambient air concentration of lead as specified in paragraph (d)(1)~~of 0.150 µg/m^3 averaged over any 30 consecutive days~~, or the ambient air concentration of arsenic of 10.0 ng/m^3 averaged over a 24-hour time period, as required under paragraph (~~d)(2) and (d)(6)~~ (d)(5), including, but not limited to, requirements for the following:

(i) Housekeeping, inspection, and maintenance activities;

(ii) Additional total enclosures;

(iii) Modifications to lead and arsenic emission control devices;

(iv) Installation of multi-stage lead and arsenic emission control devices;

(v) Process changes including reduced throughput limits;

(vi) Conditional curtailments including, at a minimum, information specifying the curtailed processes, process amounts, and length of curtailment; and

(vii) Identification of lead and/or arsenic reduction measures to be implemented relative to increasing ranges of exceedance levels of the ambient air concentration limits.

(B) The locations within the facility and method(s) of implementation for each lead and/or arsenic reduction measure of subparagraph ~~(g)(2)(A)~~(g)(3)(A); and

(C) An implementation schedule for each lead and/or arsenic emission reduction measure of subparagraph ~~(g)(2)(A)~~ (g)(3)(A) to be implemented if lead and/or arsenic emissions discharged from the facility contribute to ambient air concentrations of lead that exceed the requirements in paragraph (d)(1) ~~0.150 µg/m^3 averaged over any 30 consecutive days~~, or ambient air concentrations of arsenic that exceed 10.0 ng/m^3 averaged over a 24-hour time period, measured at any monitor pursuant to subdivision (j) or at any District-installed monitor. The schedule shall also include a list of the lead and/or arsenic reduction measures of subparagraph (g)(2)(A) that can be implemented immediately, prior to plan approval.

(~~3~~4) The Executive Officer shall notify the owner or operator in writing whether the Compliance Plan is approved or disapproved. Determination of approval

status shall be based on, at a minimum, submittal of information that satisfies the criteria set forth in paragraph (g)(2), and whether the plan is likely to lead to avoiding future exceedances of the ambient air concentration levels set forth in paragraph (g)(1). If the Compliance Plan is disapproved, the owner or operator shall resubmit the Compliance Plan, subject to plan fees specified in Rule 306, within 30 calendar days after notification of disapproval of the Compliance Plan. The resubmitted Compliance Plan shall include any information necessary to address deficiencies identified in the disapproval letter. It is a violation of the rule for a facility not to have an approved Compliance Plan after the second denial. If the resubmitted Compliance Plan is denied, the operator or owner may appeal the denial by the Executive Officer to the Hearing Board under Rule 216 – Appeals and Rule 221 - Plans.

(~~4~~5) The owner or operator shall implement measures based on the schedule in the approved Compliance Plan if lead emissions discharged from the facility contribute to ambient air concentrations of lead to exceed the requirements in paragraph (d)(1) ~~0.150 µg/m^3 averaged over any 30 consecutive days,~~ or an ambient air concentration of arsenic of 10.0 ng/m^3 averaged over a 24-hour time period as determined in paragraph ~~(d)(6)~~(d)(5), measured at any monitor pursuant to subdivision (j) or at any District-installed monitor.

(~~5~~6) The owner or operator may make a request to the Executive Officer to modify or update an approved Compliance Plan.

(~~6~~7) The owner or operator shall update the Compliance Plan 12 months from January 10, 2014 and annually thereafter, in order to update measures that have been implemented and to identify any new measures that can be implemented.

(~~7~~8) An exceedance of an ambient air concentration of arsenic of 8.0 ng/m^3 averaged over a 24-hour period shall be based on the average of the analysis of two sample results on the same filter. A second analysis is required if the first sample exceeds 8.0 ng/m^3.

(h) Housekeeping Requirements

~~No later than 30 days after November 5, 2010, the~~ The owner or operator of a large lead-acid battery recycling facility shall control fugitive lead-dust by conducting all of the following housekeeping practices:

(1) Clean by wet wash or a vacuum equipped with a filter(s) rated by the

manufacturer to achieve a 99.97% capture efficiency for 0.3 micron particles in a manner that does not generate fugitive lead-dust, the following areas at the specified frequencies, unless located within a total enclosure vented to a lead emission control device. Days of measurable precipitation in the following areas occurring within the specified timeframe of a required cleaning frequency may be counted as a cleaning:

(A) Monthly cleanings of roof tops on structures ≤ 45 feet in height that house areas associated with the storage, handling or processing of lead-containing materials; and

(B) Quarterly cleanings, no more than 3 calendar months apart, of roof tops on structures > 45 feet in height that house areas associated with the storage, handling or processing of lead-containing materials; and

(C) Weekly cleanings of all areas where lead-containing wastes generated from housekeeping activities are stored, disposed of, recovered or recycled.

(D) Initiate immediate cleaning, no later than one hour, after any maintenance activity or event including, but not limited to, accidents, process upsets, or equipment malfunction, that causes deposition of fugitive lead-dust onto areas specified in subparagraph (h)(1)(A) through (h)(1)(C). ~~Immediate cleanings of roof tops shall be completed within 72 hours if~~ If the facility can demonstrate that delays were due to safety or timing issues associated with obtaining equipment required to implement this requirement, immediate cleanings of roof tops shall be completed within 72 hours.

(2) Inspect all total enclosures and facility structures that house, contain or control any lead point source or fugitive lead-dust emissions at least once a month. Any gaps, breaks, separations, leak points or other possible routes for emissions of lead or fugitive lead-dust to ambient air shall be permanently repaired within 72 hours of discovery. The Executive Officer may approve a request for an extension beyond the 72-hour limit if the request is submitted before the limit is exceeded.

(3) Upon receipt, immediately send any lead-acid battery that is cracked or leaking ~~shall be immediately sent~~ to the battery breaking area for processing or ~~stored~~ storage pursuant to paragraph (h)(6).

(4) Pave, concrete, asphalt, or otherwise encapsulate all facility grounds as approved by the Executive Officer. Facility grounds used for plant life that

are less than a total surface area of 100 square feet shall not be subject to encapsulation. Facility grounds requiring removal of existing pavement, concrete, asphalt or other forms of encapsulation~~,~~ necessary for maintenance purposes shall not require encapsulation while undergoing work, and shall be re-encapsulated immediately after all required work is completed. All work shall be conducted in accordance with subdivision (i).

(5) Remove any weather cap installed on any stack that is a source of lead emissions.

(6) Store all materials capable of generating any amount of fugitive lead-dust including, but not limited to, slag and any other lead-containing waste generated from the housekeeping requirements of subdivision (h) and maintenance activities of subdivision (i), in sealed, leak-proof containers, unless located within a total enclosure.

(7) Transport all materials capable of generating any amount of fugitive lead-dust including, but not limited to, slag and any other waste generated from housekeeping requirements of subdivision (h), within closed conveyor systems or in sealed, leak-proof containers, unless located within a total enclosure.

(8) Initiate removal of any lead-containing material, including sludge, from the entire surface area of any surface impoundment pond or reservoir holding storm water runoff or spent water from housekeeping activities within 1 hour after the water level is $\leq$ 1 inch above the bottom of the pond or reservoir. Removal of lead-containing material is required to be completed as soon as possible, and no later than six calendar days after the time initiation of the removal was required. Thereafter, surfaces shall be washed down weekly in a manner that does not generate fugitive lead-dust until the pond or reservoir is used again for holding water.

(9) Maintain and Use an Onsite Mobile Vacuum Sweeper or Vacuum

The owner or operator of a large lead-acid battery recycling facility shall maintain an onsite mobile vacuum sweeper that is in compliance with District Rule 1186, or a vacuum equipped with a filter(s) rated by the manufacturer to achieve a 99.97% capture efficiency for 0.3 micron particles to conduct the following sweeping activities:

(A) Vacuum sweep all paved, concreted or asphalted facility areas subject to vehicular or foot traffic three times per day and occurring at least once per operating shift with each event not less than four

hours apart, unless located within a total enclosure vented to a lead control device.

(B) Immediately vacuum sweep any area specified in subparagraph (h)(9)(A), no later than one hour after any maintenance activity or event including accidents, process upsets, or equipment malfunction that results in the deposition of fugitive lead-dust.

(C) Vacuum sweeping activities specified in paragraph (h)(9) shall not be required during days of measurable precipitation.

(10) Except when inside a total enclosure, all lead or arsenic containing trash and debris shall be placed in covered containers that remain covered at all times except when trash or debris is actively transferred. Trash and debris containers shall be free of liquid or dust leaks.

(11) Post signs at all entrances and truck loading and unloading areas indicating a plant-wide speed limit of 5 miles per hour.

(i) Maintenance Activity

(1) ~~Beginning November 5, 2010, the~~ The owner or operator of a large lead-acid battery recycling facility shall conduct any maintenance activity in a negative air containment enclosure, vented to a permitted negative air machine equipped with a filter(s) rated by the manufacturer to achieve a 99.97% capture efficiency for 0.3 micron particles, that encloses all affected areas where fugitive lead-dust generation potential exists, unless located within a total enclosure or approved by the Executive Officer. Any maintenance activity that cannot be conducted in a negative air containment enclosure due to physical constraints, limited accessibility, or safety issues when constructing or operating the enclosure shall be conducted:

(A) In a partial enclosure, barring conditions posing physical constraints, limited accessibility, or safety issues;

(B) Using wet suppression or a vacuum equipped with a filter(s) rated by the manufacturer to achieve a 99.97% capture efficiency for 0.3 micron particles, at locations where the potential to generate fugitive lead-dust exists prior to conducting and upon completion of the maintenance activity. Wet suppression or vacuuming shall also be conducted during the maintenance activity barring safety issues;

(C) While collecting 24-hour samples at monitors for every day that maintenance activity is occurring notwithstanding paragraph (j)(2);

~~and~~

(D) Shall be stopped immediately when instantaneous wind speeds are ≥ ~~25~~ 20 mph. Maintenance work may be continued if it is necessary to prevent the release of lead emissions.~~;~~

(E) All concrete or asphalt cutting or drilling performed outside of a total enclosure shall be performed under 100% wet conditions; and

(F) Grading of soil shall only be performed on soils sufficiently wet to prevent fugitive dust.

(2) Store or clean by wet wash or a vacuum equipped with a filter(s) rated by the manufacturer to achieve a 99.97% capture efficiency for 0.3 micron particles, all lead-contaminated equipment and materials used for any maintenance activity immediately after completion of work in a manner that does not generate fugitive lead-dust.

(j) Ambient Air Monitoring and Sampling Requirements

~~Prior to January 1, 2011, ambient air monitoring and sampling shall be conducted pursuant to District Rule 1420. No later than January 1, 2011, the~~ The owner or operator of a large lead-acid battery recycling facility shall conduct ambient air monitoring and sampling as follows:

(1) Collect samples from a minimum of four sampling sites. Locations for sampling sites shall be approved by the Executive Officer.

(A) Locations for sampling sites shall be based on maximum expected ground level lead and/or arsenic concentrations, at or beyond the property line, as determined by Executive Officer-approved air dispersion modeling calculations and emission estimates from all lead and arsenic point sources and fugitive lead-dust and arsenic-dust sources, and other factors including, but not limited to, population exposure and seasonal meteorology.

(B) The Executive Officer may require one or more of the four sampling sites to be at locations that are not based on maximum ground level lead and/or arsenic concentrations, and that are instead at locations at or beyond the property line that are representative of upwind or background concentrations.

(C) Sampling sites at the property line may be located just inside the fence line on facility property if logistical constraints preclude placement outside the fence line at the point of maximum expected

ground level lead and/or arsenic concentrations.

(2) Collect ambient lead and arsenic samples as follows:

(A) Lead samples shall be collected daily as 24-hour, midnight-to-midnight, samples at all sites ~~for 30 consecutive days from the date of initial sampling, followed by one 24-hour, midnight-to-midnight, sample collected at least once every three calendar days, on a schedule approved by the Executive Officer~~.

(B) Arsenic samples shall be collected daily as 24-hour, midnight-to-midnight, samples collected at all sites~~least once every three calendar days, on a schedule approved by the Executive Officer~~.

(C) If a 24-hour, midnight-to-midnight sample was not collected due to a monitor malfunction or other occurrence beyond the control of the facility, the owner or operator shall:

(i) Report with a notification made to 1-800-CUT-SMOG within 2 hours of knowing that the 24-hour, midnight-to-midnight sample was not collected providing the facility name, name of the monitor, the date of the occurrence, and the reason that the 24-hour midnight-to-midnight sample was not collected; and

(ii) The operator shall not miss a 24-hour, midnight-to-midnight sample for more than one day over a consecutive 30 day period.

(3) Submit samples collected pursuant to paragraphs (j)(1) and (j)(2) to a laboratory approved under the SCAQMD Laboratory Approval Program for analysis within three calendar days of collection and calculate ambient lead and arsenic concentrations for individual 24-hour samples within 15 calendar days of the end of the calendar month in which the samples were collected. Duplicate samples shall be made available and submitted to the District upon request by the Executive Officer.

(4) Sample collection for lead and/or arsenic shall be conducted using Title 40, CFR 50 Appendix B - *Reference Method for the Determination of Suspended Particulate Matter in the Atmosphere (High Volume Method)*, or U.S. EPA-approved equivalent methods, and sample analysis for lead shall be conducted using Title 40, CFR 50 Appendix G - *Reference Method for the Determination of Lead in Suspended Particulate Matter Collected from Ambient Air*, or U.S. EPA-approved equivalent methods. Sample analysis

for arsenic shall be conducted using U.S. EPA Compendium Method IO-3.5 - *Determination of Metals in Ambient Particulate Matter Using Inductively Coupled Plasma/Mass Spectrometry (ICP/MS); EPA Compendium Method IO-3.5; In IO Compendium of Methods for the Determination of Inorganic Compounds in Ambient Air*. Alternatively, sample analysis for arsenic may be conducted using the District's *Standard Operating Procedure for The Determination of Metals in Ambient Particulate Matter by Inductively Coupled Plasma Mass Spectrometry (ICP-MS)*.

(5) Continuously record wind speed and direction data at all times using equipment approved by the Executive Officer at a minimum of one location and placement approved by the Executive Officer.

(6) Ambient air quality monitoring shall be conducted by persons approved by the Executive Officer and sampling equipment shall be operated and maintained in accordance with U.S. EPA-referenced methods.

(7) All ambient air quality monitoring systems required by this subdivision shall be equipped with a backup, uninterruptible power supply to ensure continuous operation of the monitoring system during a power outage.

(8) Cleaning activities including, but not limited to, wet washing and misting, that result in damage or biases to samples collected shall not be conducted within 10 meters of any sampling site required under this subdivision.

(9) ~~On and after January 1, 2012, if~~ If the owner or operator of a large lead-acid battery recycling facility exceeds an ambient air lead concentration ~~0.150 µg/m^3 measured~~ pursuant to paragraph ~~(d)(2)~~(d)(1),the owner or operator shall comply with the curtailment provisions of subdivision (o).~~:~~

~~(A) Begin daily ambient air monitoring and sampling no later than three calendar days of the time the facility knew or should have known of the exceedance. Conduct daily ambient air monitoring and sampling for sixty (60) consecutive days at each sampling site that measured an exceedance with paragraph (d)(2).~~

~~(B) The 60 consecutive-day period shall be restarted for any subsequent exceedance.~~

~~(C) Comply with the curtailment requirements of subdivision (p).~~

(10) ~~On and after February 1, 2014, if~~ If a large lead-acid battery recycling facility exceeds an ambient air concentration of arsenic of 10.0 ng/m^3 pursuant to paragraph ~~(d)(6)~~(d)(5), the owner or operator shall comply with the curtailment requirements of subdivision (o).~~:~~

~~(A) Begin daily ambient air monitoring and sampling no later than three calendar days from the time the facility knew or should have known of the exceedance. Conduct daily ambient air monitoring and sampling for sixty (60) consecutive days at each sampling site that measured an exceedance pursuant to paragraph (d)(6).~~

~~(B) Restart the 60-day consecutive period for any subsequent exceedance.~~

~~(C) Comply with the curtailment requirements of subdivision (p).~~

(11) The owner or operator of a large lead-acid battery recycling facility shall retain lead and arsenic samples collected pursuant to this subdivision for one year. The samples shall be stored in an individually sealed container and labeled with the applicable monitor and date. Upon request, the samples shall be provided to the Executive Officer within one business day.

(k) Source Tests

(1) The owner or operator of a large lead-acid battery recycling facility shall conduct a source test of all lead point sources at least annually to demonstrate compliance with the mass emissions standards specified in subdivision (f). If the results of the most recent source test for a lead point source demonstrating compliance with the lead emission standard of subdivision (f) ~~demonstrate~~ are below an emission~~s~~ rate of ~~0.00250~~.0012 pounds of lead per hour ~~or less~~, the next test for that lead point source shall be performed no later than 24 months after the date of the most recent test.

(2) ~~Beginning January 10, 2014, the~~ The owner or operator of a large lead-acid battery recycling facility shall conduct a source test for all arsenic point sources, and all benzene and 1,3-butadiene point sources, excluding emission control devices on total enclosures, at least annually to demonstrate compliance with the mass emissions standards specified in subdivision (f). If the results of the most recent source test demonstrating compliance with the arsenic, benzene, and 1,3-butadiene mass emissions standards of subdivision (f) are below the emission rates specified in subparagraphs (k)(2)(A) through (k)(2)(C), the next source test for those point sources shall be performed no later than 24 months after the date of the most recent source test.

(A) 0.000860 pound of arsenic per hour;

(B) 0.0386 pound of benzene per hour; and

(C) 0.00257 pound of 1,3-butadiene per hour.

(3) ~~The owner or operator of a large lead-acid battery recycling facility with an existing lead emission control device in operation before November 5, 2010 shall conduct a source test for it no later than January 1, 2011.~~ The owner or operator of a large lead-acid battery recycling facility with a new or modified lead control device with initial start-up on or after November 5, 2010 shall conduct the initial source test for it within 60 calendar days after initial start-up.

(4) Prior to conducting a source test pursuant to paragraph (k)(1), (k)(2), (k)(3), or (k)(13), the owner or operator of a large lead-acid battery recycling facility shall submit a pre-test protocol to the Executive Officer for approval at least 60 calendar days prior to conducting the source test. The pre-test protocol shall include the source test criteria of the end user and all assumptions, required data, and calculated targets for testing the following:

(A) Target arsenic, benzene, lead, or 1,3-butadiene mass emission standard;

(B) Preliminary target pollutant analytical data;

(C) Planned sampling parameters; and

(D) Information on equipment, logistics, personnel, and other resources necessary for an efficient and coordinated test.

(5) The owner or operator of a large lead-acid battery recycling facility shall notify the Executive Officer in writing one week prior to conducting any source test required by paragraph (k)(1), (k)(2), (k)(3), or (k)(13).

(6) The owner or operator of a large lead-acid battery recycling facility shall notify the Executive Officer within three business days, including Mondays, of when the facility knew or should have known of any source test result that exceeds any of the emission standards specified in subdivision (f). Notifications shall be made to 1-800-CUT-SMOG and followed up in writing with the results of the source tests within seven (7) days of notification.

(7) Source tests shall be conducted while operating at a minimum of 80% of equipment permitted capacity and in accordance with any of the following applicable test methods:

(A) SCAQMD Method 12.1 - *Determination of Inorganic Lead Emissions from Stationary Sources Using a Wet Impingement Train*

(B) ARB Method 12 – *Determination of Inorganic Lead Emissions from*

Stationary Sources

(C) EPA Method 12 – *Determination of Inorganic Lead Emissions from Stationary Sources*

(D) ARB Method 436 – *Determination of Multiple Metal Emissions from Stationary Sources*

(E) EPA Method TO-15 – *Determination of Volatile Organic Compounds (VOCs) in Air Collected in Specially-Prepared Canisters and Analyzed By Gas Chromatography/Mass Spectrometry (GC/MS)*

(F) CARB Method 410A – *Determination of Benzene from Stationary Sources (Low Concentration Gas Chromatographic Technique)*

(G) CARB Method 422.102 – *Determination of Volatile Organic Compounds (VOCs) in Emissions from Stationary Sources*

(8) The average of triplicate samples, obtained according to approved test methods specified in paragraph (k)(7), shall be used to determine compliance or to report source test results required under paragraph (k)(13).

(9) The operator may use alternative or equivalent source test methods as defined in U.S. EPA 40 CFR 60.2, approved in writing by the Executive Officer, in addition to the Air Resources Board~~, and~~ or the U.S. EPA, as applicable.

(10) The operator shall use a test laboratory approved under the SCAQMD Laboratory Approval Program for the source test methods cited in this subdivision. If there is no approved laboratory, then approval of the testing procedures used by the laboratory shall be granted by the Executive Officer on a case-by-case basis based on SCAQMD protocols and procedures.

(11) When more than one source test method or set of source test methods are specified for any testing, the application of these source test methods to a specific set of test conditions is subject to approval by the Executive Officer. In addition, a violation established by any one of the specified source test methods or set of source test methods shall constitute a violation of the rule.

(12) An existing source test conducted on ~~or~~ and after January 1, 2009 for lead emission control devices existing before November 5, 2010 may be used as the initial source test specified in paragraph (k)(1) to demonstrate compliance with the control standard of subdivision (f) upon Executive Officer approval. The source test shall meet, at a minimum, the following criteria:

(A) The test is the most recent conducted since January 1, 2009;

(B) The test demonstrated compliance with the control standard of subdivision (f); ~~and~~

(C) The test is representative of the method to control emissions currently in use; and

(D) The test was conducted using applicable and approved test methods specified in paragraphs (k)(7), (k)(9), or (k)(10).

(13) Beginning January 10, 2014, the owner or operator of a large lead-acid battery recycling facility shall conduct two source tests for benzene and 1,3-butadiene emissions from all emission control devices on total enclosures as follows:

(A) First source test conducted no later than March 1, 2014.

(B) Second source test conducted no later than September 1, 2014.

(C) Source tests on all emission control devices on total enclosures must be completed within a time period of 72 hours or less.

(14) Testing conducted by the facility, by the District, or by a contractor acting on behalf of the District or the facility to determine compliance with this rule shall be performed according to the most recent District-approved test protocol for the same purpose or compounds.

(15) Reports from source testing conducted pursuant to subdivision (k) shall be submitted to the District in 90 days or less after completion of testing.

(l) New Facilities

The owner or operator of a large lead-acid battery recycling facility beginning construction or operations on ~~or~~ and after November 5, 2010 shall:

(1) Demonstrate to the satisfaction of the Executive Officer that the facility is not located in an area that is zoned for residential or mixed use; ~~and~~

(2) Demonstrate to the satisfaction of the Executive Officer that the facility is not located within 1,000 feet from the property line of a sensitive receptor, a school under construction, park, or any area that is zoned for residential or mixed use. The distance shall be measured from the property line of the new facility to the property line of the sensitive receptor~~.~~; and

(3) Submit complete permit applications for all equipment required by this rule prior to beginning construction or operations, and otherwise on or before the time required by District rules.

(m) Recordkeeping

(1) The owner or operator of a large lead-acid battery recycling facility shall keep records of the following:

(A) Daily records indicating amounts of lead-containing material processed, including, but not limited to, purchase records, usage records, results of analysis, or other District-approved verification to indicate processing amounts;

(B) Results of all ambient air lead and arsenic monitoring, meteorological monitoring, and other data specified by subdivision (j); ~~and~~

(C) Records of housekeeping activities completed as required by subdivision (h), maintenance activities of subdivision (i), and emission control device inspection and maintenance requirements of paragraph (f)(8), including the name of the person performing the activity, and the dates and times on which specific activities were completed; and~~.~~

(D) Records of unplanned shutdowns of any smelting furnace including the date and time of the shutdown, description of the corrective measures taken, and the re-start date and time.

(2) The owner or operator of a large lead-acid battery recycling facility shall maintain all records for five years, and keep records onsite for at least two years ~~onsite~~.

(n) Reporting

(1) Ambient Air Monitoring Reports

(A) ~~Beginning no later than January 1, 2011, the~~ The owner or operator of a large lead-acid battery recycling facility shall report by the 15th of each month to the Executive Officer, the results of all ambient air lead and wind monitoring for each preceding month, or more frequently if determined necessary by the Executive Officer. The report shall include the results of individual 24-hour samples and 30-day rolling averages for each day within the reporting period.

(B) ~~Beginning no later than March 15, 2014, the~~ The owner or operator of a large lead-acid battery recycling facility shall report by the 15th of each month to the Executive Officer, the results of all ambient air

arsenic and wind monitoring for each preceding month, or more frequently if determined necessary by the Executive Officer and the owner or operator is notified in writing of the required frequency.

(C) Any exceedances of ambient air concentrations specified in paragraphs (d)(1) ~~(d)(2)~~ and (d)(~~6~~5) shall be reported with a notification made to the 1-800-CUT-SMOG within 24 hours of receipt of the completed sample analysis required in paragraph (j)(3), followed by a written report to the Executive Officer no later than three calendar days after the notification. The written report shall include the causes of the exceedance and the specific corrective actions implemented.

(D) On and after July 1, 2015, the owner or operator of a large lead-acid battery recycling facility shall report the following information in writing to the Executive Officer within 72 hours of when the facility knew or should have known that the ambient air concentration of lead was greater than 0.300 $\mu g/m^3$ for any 24-hour sample:

(i) Date of the occurrence;

(ii) Name of the monitor;

(iii) Ambient lead concentration at the monitor for the 24 hour sample;

(iv) Potential cause or causes of the occurrence; and

(v) Potential remedies to prevent the reoccurrence.

(2) Shutdown, Turnaround, and Maintenance Activity Notification

The owner or operator of a large lead-acid battery recycling facility shall:

(A) Notify the Executive Officer and the public within one hour after an unplanned shutdown of any emission control device has occurred, regardless of whether any emissions were associated with or caused by the unplanned shutdown. If the unplanned shutdown involves a breakdown pursuant to Rule 430, the breakdown notification report required by Rule 430 shall serve in lieu of this notification to the Executive Officer. The notification shall include the following information:

(i) Date and time the unplanned shutdown of the emission control device(s) occurred;

(ii) Description of the shutdown emission control device and the processes and/or equipment vented by the emission control

device;

(iii) Description of when the processes and/or equipment vented by the emission control device were shutdown, including expected shutdown time;

(iv) Reason why the emission control device was shutdown;

(v) Total duration of the unplanned shutdown, if known; and

(vi) Facility contact name and phone number for further information regarding the unplanned shutdown.

(B) ~~Beginning May 1, 2014, if~~ If an unplanned shutdown of any emission control device occurs, and the reason for the unplanned shutdown cannot be determined within the one-hour reporting period under subparagraph (n)(2)(A), the owner or operator shall investigate the reason for the unplanned shutdown and notify the Executive Officer of the reason for the unplanned shutdown within 5 business days of the event. If the reason for the unplanned shutdown is still not known within 5 business days of the event, the owner or operator shall notify the Executive Officer within 5 business days of the event and:

(i) Use an independent third party approved by the Executive Officer to conduct an investigation at the facility to determine the reason for the unplanned shutdown of any emission control device subject to this rule~~, . which~~ The investigation shall include~~s~~ but is not limited to:

(I) Physically inspecting the control equipment and surrounding portions of the facility which may provide information to understand the reason for the unplanned shutdown of emission control equipment; and

(II) Reviewing equipment maintenance and operation records, logs, and other documentation which may provide information to understand the reason for the unplanned shutdown of emission control equipment;

(ii) Use an independent third party approved by the Executive Officer to inspect all equipment repaired or replaced in response to the unplanned shutdown of emission control equipment, to ensure affected control equipment can operate

properly; and

(iii) Within 30 calendar days of the reported unplanned shutdown, provide a written report to the Executive Officer and the Director of the California Department of Toxic Substances Control. The owner or operator shall notify the Executive Officer if an approved independent third party is not available for use, or the list of approved independent third parties has not yet been developed by the Executive Officer, and shall submit the written report 30 days from when an approved third party is available. The written report shall include the following information:

(I) Date of the unplanned shutdown of emission control equipment;

(II) Reason for the unplanned shutdown of emission control equipment;

(III) List of all equipment repaired or replaced in response to the unplanned shutdown and corrective actions taken to prevent recurrence of the unplanned shutdown of emission control equipment; and

(IV) Written verification that the affected emission control equipment is operational. If the affected equipment is not operational, provide an approximate date the subject equipment is expected to be operational.

(iv) The owner or operator shall be responsible for reimbursement to the District for any and all expenses incurred by the independent third-party investigator in the investigation, inspection, and generation of a written report to determine the cause of an unplanned shutdown of any emission control equipment subject to this rule, as required by subparagraph (n)(2)(B). The owner or operator shall reimburse the District within 30 days of notification from the Executive Officer that payment is due.

(v) The reimbursement specified in clause (n)(2)(B)(iv) shall not exceed $12,000 per third-party investigation.

(C) Notify the Executive Officer and the public at least ten calendar days prior to a planned turnaround or shutdown of any smelting furnace,

battery breaker, or emission control device subject to this rule that results in arsenic, benzene, 1,3-butadiene, or lead emissions. The notification shall specify the subject equipment and the start and end date of the turnaround or shutdown period.

(D Notify the Executive Officer at least ten calendar days prior to the beginning of maintenance activity, as defined in paragraph (c)(17), that is conducted routinely on a monthly or less frequent basis. The notification and report required under subparagraph (n)(2)(F) shall include, at a minimum, the following:

(i) Dates, times, and locations of activities to be conducted;

(ii) Description of activities;

(iii) Name of person(s)/company conducting the activities;

(iv) Lead abatement procedures, including those specified in subdivision (i), to be used to minimize fugitive lead-dust emissions; and

(v) Date of expected re-start of equipment.

(E) Notify the public at least ten calendar days prior to the beginning of building construction, renovation, or demolition, and resurfacing, repair, or removal of ground pavement, concrete or asphalt if such activities are conducted outside of a total enclosure and generate fugitive lead-dust. The notification shall include, at a minimum, the following:

(i) Dates, times, and locations of activities to be conducted;

(ii) Description of activities; and

(iii) Date of expected re-start of equipment.

(F) Provide the notification to the Executive Officer required under subparagraphs (n)(2)(A), (n)(2)(C), and (n)(2)(D) to 1-800-CUT-SMOG followed by a written notification report to the Executive Officer no later than three business days, including Mondays, after the unplanned shutdown occurred.

(G) Provide notification to the public required under subparagraphs (n)(2)(A), (n)(2)(C), and (n)(2)(E) through a facility contact or pre-recorded notification center that is accessible 24 hours a day, 7 days a week, and through electronic mail using a list of recipients provided by the Executive Officer. Another method of notification to the public may be used provided it is approved by the Executive

Officer.

(H) Install a sign indicating the phone number for the facility contact or pre-recorded notification center that meets the following requirements, unless otherwise approved in writing by the Executive Officer:

(i) Installed within 50 feet of the main entrance of the facility and in a location that is visible to the public;

(ii) Measures at least 48 inches wide by 48 inches tall;

(iii) Displays lettering at least 4 inches tall with text contrasting with the sign background; and

(iv) Located between 6 and 8 feet above grade from the bottom of the sign.

(I) Install a sign indicating the phone number for the facility contact or pre-recorded notification center that meets the following requirements, unless otherwise approved in writing by the Executive Officer:

(i) Installed at all entrances and at intervals of 330 feet or less along the property line of the site or along the perimeter of the facility;

(ii) Measures at least 30 inches wide by 30 inches tall;

(iii) Displays lettering at least 2 inches tall with text contrasting with the sign background; and

(iv) Located between 6 and 8 feet above grade from the bottom of the sign; and

(v) In addition to the phone number, the sign shall also display the following information:

Caution

Lead-Acid Battery Recycling Facility

Call before digging

(J) Notify the Executive Officer at least ten calendar days prior to a planned breach or within one hour after an unplanned breach to a total enclosure such that it no longer meets the definition of a total enclosure pursuant to paragraph (c)(29). The notification shall include the following information:

(i) Date and time of planned or unplanned breach to the total enclosure;

(ii) Explanation of breach to the total enclosure;

(iii) Total duration or if not known, estimated duration of breach to the total enclosure; and

(iv) Facility contact name and phone number for further information.

(3) Initial Facility Status Report

(A) Initial Facility Status Report Due Date

The owner or operator of a large lead-acid battery recycling facility existing before November 5, 2010 shall submit an initial facility status report to the Executive Officer no later than January 1, 2011. Large lead-acid battery recycling facilities beginning construction or initial operations after November 5, 2010 shall submit the initial compliance status report upon start-up.

(B) The initial facility status report shall contain the information identified in Appendix 1.

(4) Ongoing Facility Status Report

The owner or operator of a large lead-acid battery recycling facility shall submit a summary report to the Executive Officer to document the ongoing facility status.

(A) Frequency of Ongoing Facility Status Reports

The report shall be submitted annually on or before February 1 for all sources and shall include information covering the preceding calendar year.

(B) The content of ongoing facility status reports shall contain the information identified in Appendix 2.

(5) Adjustments to the Timeline for Submittal and Format of Reports

The Executive Officer may adjust the timeline for submittal of periodic reports, allow consolidation of multiple reports into a single report, establish a common schedule for submittal of reports, or accept reports prepared to comply with other state or local requirements. Adjustments shall provide the same information and shall not alter the overall frequency of reporting.

~~(o) Lead Emission Rate Feasibility Study~~

~~On and after July 1, 2011, the first time emissions are discharged into the atmosphere which contribute to ambient air concentrations of lead that exceed 0.120 µg/m^3, averaged over any 30 consecutive days, determined by monitors pursuant to~~

~~subdivision (j) or at any District-installed monitor, the owner or operator of a large lead-acid battery recycling facility shall submit a study addressing the technical, economic and physical feasibility of achieving a total facility mass lead emission rate of 0.003 pounds per hour from all lead point sources. The study shall be submitted within 30 calendar days after exceeding 0.120 µg/m^3, averaged over any 30 consecutive days. Subsequent exceedances of ambient air concentrations of lead of 0.120 µg/m^3 do not trigger another feasibility study.~~

(~~p~~o) Curtailment Requirements

(1) ~~On and after February 1, 2014, the~~ The owner or operator of a large lead-acid battery recycling facility shall implement the following mandatory daily process curtailments if emissions are discharged into the atmosphere which contribute to monitored ambient air concentrations of lead, as determined pursuant to paragraph (d)(1) ~~and (d)(2)~~, and/or ambient air concentrations of arsenic, as determined pursuant to paragraph (d)(~~6~~5), that exceed the thresholds listed below in Table 1:

Table 1 – Process Curtailments Based on Ambient Air Concentrations of Lead and/or Arsenic

Air Contaminant	Monitored Ambient Air Concentration	Reduction in Feedstock Charged to Reverberatory Furnace
Lead	Prior to January 1, 2016: >0.150 – 0.230 µg/m^3 January 1, 2016 to December 31, 2016: >0.110 – 0.230 µg/m^3 On and after January 1, 2017: >0.100 – 0.230 µg/m^3	15%
	>0.230 – 0.300 µg/m^3	25%
	>0.300 – 0.375 µg/m^3	50%
	>0.375 µg/m^3	75%
Arsenic	>10.0 – 15.0 ng/m^3	15%
	>15.0 – 20.0 ng/m^3	25%
	>20.0 – 25.0 ng/m^3	50%
	>25.0 ng/m^3	75%

(A) The process curtailments for exceedances of the ambient air concentration of lead thresholds in Table 1 shall remain in effect until the monitoring results at each affected monitoring station are at or below the ambient lead concentration limits specified in paragraph (d)(1) ~~0.150 µg/m^3 of lead averaged over any 30 consecutive days,~~ for a period of 30 consecutive days, or the monitoring results at each affected monitoring station are at or below ~~0.120 µg/m^3~~ 0.100 µg/m^3 for at least 10 consecutive days and no other monitor exceeds the thresholds specified in subdivision (d); and

(B) The process curtailments for exceedances of the ambient air concentration of arsenic thresholds in Table 1 shall remain in effect until the monitoring results at each affected monitoring station are at or below 10.0 ng/m^3 of arsenic averaged over a 24-hour time period, for a period of at least 30 consecutive days.

(2) The owner or operator of a large lead-acid battery recycling facility shall implement the following mandatory daily process curtailments if the total facility mass emissions from all lead and/or arsenic point sources exceed the thresholds listed below in Table 2:

Table 2 – Process Curtailments Based on Total Facility Mass Lead and/or Arsenic Emissions From All Point Sources

Effective Date	Air Contaminant	Total Facility Mass Emission Rate (lbs/hour)	Reduction in Feedstock Charged to Reverberatory Furnace
On and after January 10, 2014	Lead	Prior to January 1, 2016 >0.045 – 0.0675 On and after January 1, 2016 >0.023 – 0.0675	15%
		>0.0675 – 0.09	25%
		>0.09 – 0.1125	50%
		>0.1125	75%
No later than 60 days after January 10, 2014 to December 31, 2014	Arsenic	>0.00285 – 0.00428	15%
		>0.00428 – 0.00570	25%
		>0.00570 – 0.00713	50%
		>0.00713	75%
On and after January 1, 2015	Arsenic	>0.00114 – 0.00171	15%
		>0.00171 – 0.00228	25%
		>0.00228 – 0.00285	50%
		>0.00285	75%

(A) The process curtailments in Table 2 shall remain in effect until the facility demonstrates compliance using the most recent District-approved source tests conducted by the facility or the District, pursuant to subdivision (k).

(3) Reductions in feedstock charged to the reverberatory furnace required by paragraphs ~~(p)(1) or (p)(2)~~(o)(1) or (o)(2) shall be based on the daily average of materials charged to the reverberatory furnace over the previous 90 days of operation prior to when the facility knew or should have known of the exceedance~~;~~.

(4) The process curtailments in Table 1 and Table 2 shall begin within 48 hours of the time when the owner or operator receives sampling results indicating

an exceedance of any lead and/or arsenic threshold listed in Table 1 or Table 2~~; and~~.

(5) The owner or operator of a large lead-acid battery recycling facility may temporarily exceed the mandatory process curtailments specified in Table 1 of paragraph ~~(p)(1)~~(o)(1) and Table 2 of paragraph ~~(p)(2)~~(o)(2), only for the period of time required to perform source tests to demonstrate compliance with this rule.

(~~q~~p) Severability

If any provision of this rule is held by judicial order to be invalid, or invalid or inapplicable to any person or circumstance, such order shall not affect the validity of the remainder of this rule, or the validity or applicability of such provision to other persons or circumstances.

Appendix 1 – Content of Initial Facility Status Reports

Initial compliance status reports shall contain, at a minimum, the following information:

1. Facility name, District Facility ID number, facility address, owner/operator name, and telephone number.
2. The distance from the property line of the facility to the property line of the nearest commercial/industrial building and sensitive receptor.
3. Worker and sensitive receptor locations, if they are located within one-quarter mile from the center of the facility.
4. Building parameters
    - Stack heights in feet (point sources); or
    - Building area in square feet (volume sources).
5. A description of the types of lead processes performed at the facility.
6. The following information shall be provided for each of the last five calendar years prior to November 5, 2010:
    - Annual amount of lead-containing material processed;
    - The maximum and average daily and monthly operating schedules;
    - The maximum and average daily and monthly lead-processing rates for all equipment and processes;
    - The maximum and average daily and annual emissions of lead from all emission points and fugitive lead-dust sources.
7. The approximate date of intended source tests for all lead emission control devices, as required by subdivision (k) of this rule.
8. Engineering drawings, calculations or other methodology to demonstrate compliance with paragraphs (d)(1) ~~through (d)(3)~~ and (k).
9. Air dispersion modeling calculations using procedures approved by the Executive Officer to determine the location of sampling sites as required by subdivision (j).
10. All information necessary to demonstrate means of compliance with subdivision (j).
11. The name, title, and signature of the responsible official certifying the accuracy of the report, attesting to whether the source has complied with the provisions of this rule.
12. The date of the report.

Appendix 2 – Content of Ongoing Facility Status Reports

Ongoing facility status reports shall, at a minimum, contain the following information:

1. Facility name, District Facility ID number, facility address, owner/operator name, and telephone number.
2. The beginning and ending dates of the calendar year for the reporting period.
3. The following information shall be provided for each of the last 12 calendar months of the reporting period:
    - Annual amounts of lead-containing material processed;
    - The maximum and average daily and monthly lead-processing rates for all equipment and processes;
    - The maximum and average daily and annual emissions of lead from all emission points and fugitive lead-dust sources.
4. Worker and sensitive receptor distances, if they are located within ¼ of mile from the center of the facility and facility maximum operating schedule, if changed since submittal of the initial compliance status report or prior year's ongoing compliance status and emission reports.
5. A description of any changes in monitoring, processes, or controls since the last reporting period.
6. The name, title, and signature of the responsible official certifying the accuracy of the report.
7. The date of the report.

Appendix 3 – Continuous Furnace Pressure Monitoring (CFPM) Plan

The CFPM Plan shall, at a minimum, contain the following information:

1. A description of the type and design of the differential pressure monitoring device(s).
2. The specifications of the resolution, increment of measurement, and range of the differential pressure monitoring device(s).
3. A drawing and description of the exact location where each differential pressure monitoring device is to be located.
4. If differential pressure monitoring device(s) are already installed, all available recorded data of the static differential furnace pressure(s) as requested by the Executive Officer.
5. If applicable, the maximum alternative static differential furnace pressure in inches water column that the owner or operator will operate the reverberatory furnace at, and a demonstration that it can achieve emission reductions that are equivalent to or better than those achieved when operating at a pressure of -0.02 or more negative. The alternative static differential furnace pressure shall not exceed 0.4 inches water column.